VOLUME XXXVII, No. 26 DECEMBER 19, 1940

THE JOURNAL OF PHILOSOPHY

PROPOSITIONS, OPINIONS, SENTENCES, AND FACTS

THERE is perhaps no question more basic for the theory of knowledge than that of the nature of propositions and their relations to judgments, sentences, facts, and inferences. Yet even the philosophers who give it explicit consideration seldom heed consistently in practice the implications of their own answers to it. In this paper I attempt to formulate with some precision at least the main points of what seems to me the right answer to that question, and to exhibit a number of interesting and important consequences of it.

1. *The "Epistemic Attitudes."*—Stebbing states that "A proposition is anything that is believed, disbelieved, doubted, or supposed."[1] But since, as Stebbing herself would probably grant, there are countless propositions never yet considered and therefore never yet believed, disbelieved, doubted, or supposed by anybody, her statement should be amended to read that a proposition is anything *susceptible* of being believed, disbelieved, or doubted. Let us first consider belief, disbelief, and doubt.

These, as W. E. Johnson has emphasized, are no part of any propositions but are *attitudes* that some persons have towards some propositions.[2] I propose to say that belief and disbelief are respectively the extremes of a unique kind of attitude, which has degrees. If we call this kind of attitude "inclination to believe,"[3] then belief will be defined as its maximum (100%) degree and disbelief as its minimum (0%) degree; or if we prefer to call the attitude "inclination to disbelieve," belief is then its minimum and disbelief its maximum. Any degree of "inclination to believe" (e.g., 25%) is thus one and the same thing with the *supplementary* degree (here, 75%) of "inclination to disbelieve." The various degrees of this sort of attitude I shall call the various *epistemic attitudes*.[4]

[1] *A Modern Introduction to Logic*, p. 33.

[2] Cases in which belief, disbelief, or doubt is present but is not towards any proposition are relevant not to epistemology but to psychopathology.

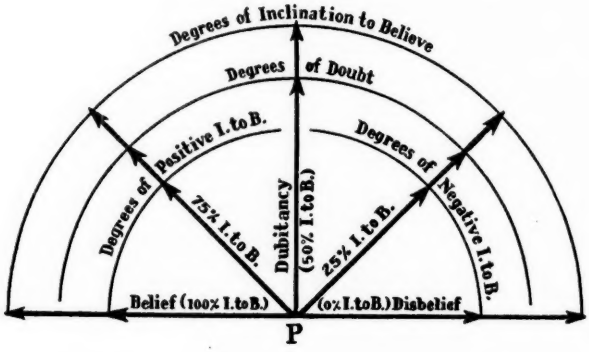
[3] I am using these words not as a description of the attitude, but as a *name* for it.

[4] No claim is intended that the degrees of inclination to believe can be accurately quantified. Such figures as 25%, 75%, are used here only as expository devices.

Cases where inclination to believe is *greater* than inclination to disbelieve will be called cases of *positive inclination to believe* (or negative inclination to disbelieve); and cases where it is *smaller* will be called cases of *negative inclination to believe* (or positive inclination to disbelieve).

Cases where inclination to believe is *positive* or is *negative* are cases of *opinion;* and any epistemic attitude consisting of some degree of positive or of negative inclination to believe is an *opinative* attitude.[5]

The degree of inclination to believe which is *neither* positive nor negative will be called *dubitancy* rather than doubt, for "doubt" in ordinary usage has several senses. In phrases such as "I am in


Degrees of Inclination to Believe
Degrees of Doubt
Degrees of Positive I. to B.
Degrees of Negative I. to B.
75% I. to B.
Dubitancy (50% I. to B.)
25% I. to B.
Belief (100% I. to B.)
(0% I. to B.) Disbelief
P

doubt as to whether or not . . . ," or "The point in doubt is whether or not . . . ," "doubt" has approximately the meaning for which I have just proposed "dubitancy." But in the more frequent cases where "doubt" is followed by "that" or "what," e.g., "I doubt that he will come," "I doubt what he asserts," "to doubt" rather means to have positive but not maximal inclination *to disbelieve.* Nevertheless, we should ordinarily also be said to have "some doubt" even in the opposite cases, viz., those where we have positive but not maximal inclination *to believe.* To avoid ambiguity, then, let us agree that "doubt," as a technical term, will be the name for any degree of inclination to believe *other* than the maximal and minimal. Dubitancy will thus be the exactly middle degree of doubt.

[5] The term "inclination to believe" as used here is formally analogous to the term "probability." That is, just as in non-technical usage "probable" is opposed to "improbable," but in technical usage covers the whole range from "certainty" (or better, necessity) to impossibility, so the term "inclination to believe" would in non-technical usage mean what has been called above *positive* inclination to believe, but in the technical usage proposed it covers the whole range from belief to disbelief, both inclusive.

The diagram (p. 702) represents the various degrees of inclination to believe by the various positions above the horizontal of a pointer revolving about the point *P*. The various arcs drawn are labelled in accordance with the definitions given. Where an arc is drawn terminating just short of the horizontal or vertical, this means that only the degree represented by the horizontal or vertical is excluded from the degrees represented by the arc.

2. *Propositions, Opinions, and Judgments.*—*A* belief, or *a* disbelief, is a proposition *together with,* respectively, the attitude of belief or of disbelief towards it. More generally, *an* opinion is a proposition together with some degree of positive or of negative inclination to believe it. To refer to a proposition together with the dubitancy attitude towards it, the terms "a dubitancy" or "a dubitation" would be awkward, and the term "a doubt" would be ambiguous. The best term I can think of is "a question," if used with the proviso that the interrogative sentence which formulates a question shall not also itself be called "a question" (as often it is in non-technical usage).

As regards *judgment,* to judge is to decide between alternatives, and the term "*a* judgment" is therefore best reserved for *an opinion reached through choice between alternatives.* Since many opinions are reached without consciousness of their alternatives, simply by imitation or suggestion, "opinion" is a wider term than "judgment." All judgments are opinions but not all opinions are judgments. Lastly, for a proposition together with *any* one of the epistemic attitudes towards it, I shall use the term "*a predication.*"

3. *Sentences.*—The formulation, i.e., the discursive symbol, of a predication is a *sentence.* The discursive symbol of an opinion is a *declarative* sentence; of a question, an *interrogative* sentence. A sentence is normally, but not invariably, a sign that the person who utters it has, towards the proposition it formulates, the particular epistemic attitude the sentence *also* formulates. A case where it is not a sign of this would be an interrogative sentence in a paper setting an examination, or any case where one formulates an opinion not held by oneself—the uttering of the sentence then constituting either quoting or lying.

It is important to realize that an opinion, e.g., a belief, may exist without formulation. When, for instance, a clerk unrolls paper with which to wrap a parcel, there comes a moment when he *believes,*—indeed, believes through judgment—that the length of paper unrolled is sufficient to go around the parcel. But for this belief to exist in him formulation of it is not in the least required. That is, the words "This length is enough" need not at all be uttered or imagined by the clerk and in fact seldom are.

4. *Symbols of Epistemic Attitudes and of Propositions.*—Perhaps no precaution avoids so many epistemological pitfalls as that of distinguishing in a sentence between the constituents of it which symbolize the proposition concerned (I shall call it the "*content*" of the predication the sentence formulates), and the constituents which symbolize the epistemic attitude towards that proposition. The latter constituents are such words as "is" or "is not" or, more generally, the *affirmative* or *negative* form of the verb whether or not modalized (e.g., by "may," "must," "can not," "probably," etc.).[6]

If we eliminate these constituents from the sentence, then what we have left of it symbolizes *only* the proposition. For example, in the sentence "Napoleon was short," "was" formulates the attitude of belief,[7] and "Napoleon, short" formulates the proposition believed. In the sentence "Napoleon was not short," the proposition is the same, viz., "Napoleon, short" but the words "was not" symbolize disbelief.[8] Again, if from the relational sentence "John loves Mary" we eliminate the symbol of the epistemic attitude, viz., here the affirmative form of the verb, we have left "John loving Mary" as symbol of the proposition believed. The sentence "John does not love Mary" formulates the *same* proposition, but disbelief instead of belief towards it.

The question of negative terms naturally suggests itself here, but I think need not be gone into at any length for the purposes of this paper. I shall only say that I would accept "not short" as a negative term only if it is taken as synonymous with "either tall or medium-sized"; but not if it is taken as synonymous with "either tall, or medium, or dark-eyed, or soluble in alcohol, or divisible by 3, or . . . (every adjective *other* than 'short' and other than any

[6] This parenthesis is not to be taken as claiming that "It is probable that . . . ," or the adverb "probably," always means simply that the person who utters the words has positive inclination to believe the proposition concerned. The claim is only that often, in ordinary discourse, a person who so speaks is actually expressing thereby only the presence in him of positive inclination to believe; and not also perception by him of a certain relation between the opinion he voices and certain items of evidence.

[7] Also, of course, the fact that the time of utterance of the sentence is later than the time of Napoleon.

[8] Mr. W. E. Johnson says that "is" symbolizes two things at once—the assertive attitude and the "characterizing tie," *Logic*, Vol. I, p. 13. The latter, however, as he himself notes, is symbolized automatically by the mere juxtaposition of a substantive and an adjective. Therefore no separate, additional symbol for it is needed nor, I believe, occurs in ordinary language. That is, the declarative forms of the verb "to be," as occurring between a substantive and an adjective, symbolize (in addition to the time and other relations symbolized by the various "modes" of any verb) *only* the epistemic attitude present in the particular case.

implying 'short')." I do not think anybody who declares "Napoleon was not short" ever intends to express thereby belief that Napoleon was "not short" in the *latter* sense. Rather, what he intends to express is belief that Napoleon was either medium or tall; or else disbelief that Napoleon was short.

The fact that a sentence symbolizes not only a proposition but also an epistemic attitude towards it—the two together being what an opinion is—has the epistemologically important consequence that the examples of "propositions" given in textbooks are in fact in almost all cases examples of *opinions,* and that opinions—not propositions simply—are then what is actually discussed there, usually unawares. And when the difference between propositions and opinions is kept in mind, it becomes obvious that, contrary to the usual teaching, *propositions are neither affirmative nor negative.* The distinction between affirmative and negative applies only to opinions and to the sentences which formulate them.

It also becomes obvious that the constituents of syllogisms or, more generally, of inferences are not propositions simply but opinions; and this in turn suggests that, as I shall try to show on some other occasion, not only frequencies, but also the degrees of inclination to believe these frequencies, are intrinsic to the concept of probability.

The distinctions pointed out in this and the preceding sections have other interesting consequences, some of which may now be pointed out.

5. *A Sentence Formulates a Given Opinion Correctly or Incorrectly.*—A sentence considered as attempted formulation in a given language of an opinion, has one or the other of the two "values," *correctness* and *incorrectness.* A sentence is a correct formulation of a given opinion in a given language if it presents to other users of that language exactly the same opinion the utterer of the sentence intended to present. If the sentence presents to them a different opinion, it is incorrect. Correctness or incorrectness of a sentence thus has nothing to do with the merits of the opinion the sentence attempts to formulate.

If a declaratory sentence, uttered without quotation marks or their equivalent, is intended by the utterer to symbolize an opinion he does not himself hold, then his utterance is *mendacious.* In the opposite case, it is *veracious.*

6. *An Opinion Is Sound or Erroneous.*—"Truth" is often contrasted with "error," but it is of the greatest importance to notice that since error is one thing and falsity another, *"truth" as opposite of "error" is a different concept from "truth" as opposite of "falsity."* Error is positive inclination to believe a proposition

which is false, or negative inclination to believe a proposition which is true; and the opposite of error, which, to avoid ambiguity, I shall call *"soundness"* rather than "truth," is what we have when we positively incline to believe a proposition which is true, or negatively incline to believe a proposition which is false. Thus, erroneousness and soundness are "values" that only opinions, not propositions simply, can have.

Perception of this makes clear the inadvisability of speaking of a *sentence* as "true" or "false" unless we then specify whether by a "true sentence" we mean one formulating a given opinion *correctly;* or one formulating a *sound opinion;* or one formulating an opinion the content of which is a *true proposition;* (and analogously with "a false sentence"). For the proposition which is the content of a sound opinion is not necessarily a true proposition: if I disbelieve a proposition which is false, my opinion is sound although its content is a false proposition. And if I disbelieve a proposition which is true, my opinion is erroneous although its content is a true proposition.

7. *A Proposition Is True or False.*—When the question is raised what a proposition is, it often is answered by saying that a proposition is the sort of thing (and the only sort of thing) susceptible of being true or false. This answer, which so far as it goes I accept, means, more specifically, that every proposition has one of these two "truth-values" and that no proposition has both; but that if one knows about something only that it is a proposition, then one does not know whether its truth-value is "truth" or is "falsity."

The statement is occasionally met with today, however, that propositions are susceptible of other truth-values besides "true" and "false," e.g., "probably true," "necessarily true," etc. The opinion this statement is intended to formulate would be sound if it were *only* that a many-valued symbolic system is as possible as a two-valued one, and that the many values may, for formal purposes, be given any *names* one pleases, e.g., "necessarily true," "possibly false," "not known to be true"; or indeed, "anna," "cora," "dora," etc.[9] Otherwise it is unsound and rests on confusions between truth-value (of propositions), soundness-value (of opinions), and probability-value (of inferences); and between implication (which is a relation between propositions simply) and inference (which is an operation performed by some mind and having as its constituents not propositions simply but opinions).[10]

[9] Cf. C. A. Baylis, "Are Some Propositions Neither True Nor False?" *Philosophy of Science,* Vol. 3 (1936), pp. 156–166.

[10] For a particularly glaring example of a *non sequitur* resulting from neglect of these distinctions, see P. W. Bridgman, *The Nature of Physical*

8. *Unlike Truth and Falsity, Soundness and Erroneousness Have Degrees.*—The only epistemic attitude which would be *completely* appropriate theoretically towards a true proposition would be belief; and towards a false proposition, disbelief. But every proposition has one and only one of the two truth-values, "true," "false." Therefore, even without knowing whether a given proposition P is true or is false, we know that any degree of inclination to believe it, other than either the maximal or the minimal, is theoretically inappropriate in some degree. This means that *there are degrees of soundness and erroneousness;* although there are no degrees of truth or of falsity: If the proposition which is content of an opinion is true, and the inclination to believe that proposition is positive, the opinion is sound; but if the positive inclination to believe the proposition is *great,* the opinion is *sounder* than if the positive inclination is small. Again, if the content-proposition is true, and the inclination to believe it is negative, the opinion is erroneous; but if the negative inclination to believe is great, the opinion is *more erroneous* than if the negative inclination is small.

It should be noted, however, that "error" is often used in another sense than the one already defined. In the latter, "erroneousness" has "soundness" as opposite. In this sense, two opinions, of which one is more erroneous than the other, both have as content *the same proposition;* and their difference in degree of erroneousness is a matter solely of their difference in degree of inclination to believe.

In the other sense, however, "error" is used to refer also to the various degrees of *approximateness,* and its opposite is then "*exactness.*" When an opinion is said in this sense to be more erroneous than another, the two have as contents *two propositions in part different.* For example, if the fact is that a given shot did hit the bull's eye, then the opinion consisting in belief of the proposition "This shot, having hit *far* from the bull's eye" is more erroneous (contains a greater error) than the opinion consisting in belief of the proposition "This shot, having hit *near* the bull's eye." It is in this sense that we speak of "errors of measurement," the "prob-

Theory, p. 41. Bridgman there considers the statement that somewhere in the decimal expansion of π there occurs the sequence 0 1 2 3 4 5 6 7 8 9. He then argues that because today this statement can not be either proved true or proved false, it is neither true nor false; whereas obviously the conclusion warranted is only that *today no one knows* whether it is true or false. In saying this, I am not objecting by implication to the defining of "truth" in terms of verifiability, for I would myself so define it. But to define it *tenably* in such terms, it is indispensable to distinguish sharply between "verifiability" as property of certain propositions, and "verifiability" as ability of a given human being at a given time to verify certain propositions.

able error'' of a set of observations, etc. Both senses, however, have in common the element that the inclination to believe is negative where it should be positive, or positive where it should be negative.

9. *Subject and Predicate.*—It has often been asserted in recent years that some propositions, and in particular relational propositions, do not have a subject and predicate. The truth, I believe, is that *no* propositions, but all *judgments,* have subject and predicate; and this because the distinction between subject and predicate is neither formal nor objective, but solely epistemic. That is, it can be defined only in terms of the constituents of epistemic attempts.

An epistemic attempt is an attempt to resolve some question—some cognitional problem. And in every such attempt there is both a *datum* and a *dubitatum.* There is something the problem *is about* and something the problem *is as to*—something about which the question is (but not itself in question), and something in question about it. For example, the question stated by the interrogative sentence ''Was Napoleon short?'' would ordinarily be *about* Napoleon (whose existence is then not in question but given), and *as to* stature or, more specifically, shortness of stature. And in the opinion reached *by deciding this question,* that is, in the judgment that, let us say, Napoleon was short, or in *any* judgment, the distinction between what was given and what has been found about it—the distinction between *datum* and *repertum*—is the distinction between the *subject* of the judgment and its *predicate.* A relational judgment, e.g., John loves Mary, then obviously has subject and predicate like any other. But its subject or predicate can not be identified by examination either of the sentence which formulates it or of the proposition which is its content, but only by examination of the question the judgment actually attempts to resolve. For example, if the question was ''whom does John love?'' then ''Mary'' is the predicate; if the question was ''What emotional relation does John have to Mary?'' then ''loves'' is the predicate; if the question was ''Does the relation 'loves' exist anywhere?'' then ''From John to Mary'' is the predicate, etc.

It is important, however, to notice that the distinction between subject and predicate, as defined above, is not the same as that between substance and attribute, or object and character, or particular and universal, or substantive and adjective.[11] In the first example used above, indeed, the subject of the judgment was a substance and the predicate was a character. But if the question had been not what sort of stature Napoleon had, but whether any cases of short-

[11] The last three pairs of terms are here used in Johnson's sense. See his *Logic,* Vol. I, 5.

ness of stature have existed, then, in formulating the resolving judgment, we should either have had to stress the word "Napoleon," writing: "*Napoleon* was short" (instead of "Napoleon was *short*"); or to rephrase the sentence to read: "Shortness of stature existed in Napoleon"; for our question would then have been *about* shortness of stature, not about Napoleon, and *as to* existence of it. That is, shortness of stature would have been the *datum* or subject of our judgment and Napoleon its *repertum* or predicate. Thus, in descriptive (or, as I should prefer to say, quiddative) judgments the subject is an existent and the predicate a character; but in existential judgments the subject is a character and the predicate an existent.

The very same *proposition,* however, viz., "Napoleon, short," was the content alike of the descriptive and of the existential judgments used as examples. Each of its constituents, therefore, was susceptible of functioning as subject (of a certain judgment) or as predicate (of a certain other); and the distinction between subject and predicate therefore can not be made within the proposition itself. What can be said of a proposition is only that, since any proposition is the potential content of at least one pair of judgments (one existential and one quiddative), a proposition must always be analyzable (in one or in several ways) into two constituents —one capable of functioning as *datum* of an existential or as *repertum* of a quiddative judgment, and the other as *repertum* of an existential judgment or as *datum* of a quiddative. In this paper, however, there is no room to indicate more explicitly than above what sort of intrinsic nature it is, which fits the constituents of the proposition to function in the ways just mentioned.

10. *Propositions and Facts.*—Some authors assert that the word "fact" has a variety of senses. Cohen and Nagel, for instance, attempt to describe and illustrate four:[12] (1) "Certain discriminated elements in sense perception," e.g., that which is denoted by the expression "This band of color lies between those two bands." (2) "The propositions which *interpret* what is given to us in sense experience," e.g., "This is a mirror." (3) "Propositions which truly assert an invariable sequence or conjunction of characters," e.g., "All gold is malleable." (4) "Those things existing in space or time, together with the relations between them, in virtue of which a proposition is true. Facts in this sense are neither true nor false, they simply *are.*"

Examination of these descriptions and illustrations of the alleged several senses of the word "fact" reveals first that although these

[12] *An Introduction to Logic and Scientific Method,* pp. 217–218.

writers earlier [13] warned their readers against confusing propositions either with sentences or with the mental acts required to think of propositions, they themselves here lose sight of the distinction. Otherwise they could not speak of *propositions* as *interpreting* what is given us in sense experience; for interpreting is a mental act performed by us, whereas a proposition neither is a mental act nor performs any. The interpreting by us of "what is given us in sense experience" consists in our *thinking of and affirming* a certain proposition. Again, these authors speak in the third statement quoted of propositions *as asserting.* But a proposition does not assert or deny anything: *we* assert or deny *it.*

I contend that *"a fact" and "a true proposition" mean identically the same thing.* The evidence is that the expression "It is true that . . ." can always be substituted for "It is a fact that . . ." and *vice versa;* and that nothing can be deduced from what either expression formulates, which can not be deduced from what the other formulates. Furthermore, examination of Cohen's and Nagel's illustrations of the alleged four senses of "fact" reveals that in each case the illustrating fact consists of *a proposition which is true,* and that what these authors distinguish are not four *senses* of the word "fact" but four *kinds* of facts; and this—as perfectly proper in the context where they make the distinction—chiefly on the basis of the kind of evidence which makes known to us the truth of the propositions concerned.

Additional comments, however, are called for by their statement that "facts" in the sense of things in space or time, together with the relations between them, simply *are.*[14] It may be noted first that, of *true* propositions, we can similarly say that they "simply are," and can not say (except redundantly) that they are true, nor (without a contradiction) that they are false. On the other hand, the expression "true facts," which actually is not uncommon,[15] is improper only in that it contains a redundancy, and "false facts" in that it contains a contradiction. Thus there is still an exact parallelism between what we can and can not say of "facts," and of "true propositions." And further, if we ask what exactly can be meant by the assertion that facts "simply *are,*" the answer would seem to be that if it is not the mere tautology that "facts are facts," it must be that "facts exist," i.e., that "there

[13] *Loc. cit.,* p. 28.

[14] Cf. Stebbing, *op. cit.* "Facts simply *are;* they are neither true nor false."

[15] See, for instance, Whewell, *Nov. Org. Renov.* Table of Contents. There (p. xiv) Art. 1 of Chapter III is entitled "Facts must be true." See also p. 51.

are facts." But then, similarly, one can say that "true propositions exist," i.e., that "there are true propositions."

The truth of the matter would seem to be that the fourth of the alleged senses of the word "fact" is, like each of the other three, only a fourth *class* of facts, viz., those loosely said to consist of "things" and "events" (as when we say that a tree, or an explosion, is a fact); but strictly consisting of *the existence* of a kind of thing or *the occurrence of* a kind of event, at some specific place in space or time or both. And "existence of a tree here now," or "occurrence of an explosion there then," are statements of *propositions;* and of *true* propositions if of facts at all.

If, by "proposition," we mean the sort of thing alone susceptible of being believed, disbelieved, or doubted, then "a fact" and "a true proposition" mean identically the same thing. But of course, if by "a proposition" we mean a *sentence,* or a certain sort of *thought* (not what is *thought of* by it), then indeed a "true proposition" in either of these two senses is not the same thing as a "fact." Rather it then "represents" or "corresponds to" a fact. But I ask, what sort of thing is then the "fact" corresponded to by the sentence or the thought? I submit that it is nothing other than *a true proposition,* in the sense of "proposition" defined as the sort of thing alone susceptible of being believed, disbelieved, or doubted. That is, one can not consistently *both* accept this sense, and deny that "a fact" and "a true proposition" are the same thing.

If the truth of a proposition can not be said to consist in "correspondence" of the proposition to a fact, what then can it consist in? I believe it can still be described as "correspondence," but *as between the constituents themselves of the proposition.* What "correspondence" means there, however, is too long a story for the present occasion.

C. J. DUCASSE.

BROWN UNIVERSITY.

THE ANALOGY OF THE RECORD

MAN'S incorrigible tendency to make and to collect records, long a distinguishing mark of human activity, has assumed proportions which suggest the advisability of inquiring whether the methods and the results of such collecting have not in some cases tended to confuse his thought. The aim of this paper is to examine certain instances in which this seems to have happened, in the hope of correcting the errors which may have resulted, or at least of warning against them. The tendency, if we wanted a name for it, might be called "apomnemoneumatism," which after

all is not much longer than "instrumentalism"; but as it may appear somewhat horrendous it is better to keep to the simpler phrase which forms our title.

A good many records, in the aggregate, are unintentionally made and accidentally preserved—material traces, the significance of which is later perceived by some observer, as with so much of the subject-matter of geology and archeology. No glacial drift, no trilobite intended to leave a record behind for the edification of future geologists; and even a building or a document, though it was originally a human creation, may not have been made with any distinct expectation of permanence, and may owe its survival entirely to chance. But to a large extent we nowadays think of a record as intentional, made either by the interposition of an instrument (recording or self-recording) or by the construction of what may be called, in the widest sense of the term, a graph; and it is with such records that the present discussion is chiefly concerned.

The first business of a record so conceived is to be compendious —to "abridge the infinity of individual experience," in Bacon's phrase, by making permanent some significant aspect of it. From this function it follows that no record can be the complete equivalent of the original experience, and that records based on different aspects of the same original experience may be startlingly different from each other. Further, a record should be understandable by others than its maker; but its meaning, far from being self-evident, may need much attention for its proper decipherment. Finally, whatever the conclusions to which it leads, it must first be made and transmitted on the level of ordinary perceptual experience. These are not recondite points—which is perhaps why they are not always taken into account.

For our first example, let us take the engram or material trace as an explanation of memory. It is entirely possible to conceive that such traces should record certain changes in the organism; indeed, on a large scale, they are obvious enough. But when they have to be vastly reduced in scale, and endowed with many remarkable properties, their explanatory value decreases. It seems to draw much of its initial plausibility from the fact that we can make photographic or phonographic records which, in a suitable apparatus, will reproduce the original sights and sounds; but it is not clear who would perform these offices for the engram, or where the records would be stored in the intervals of forgetfulness. Nor are all recollections of such a nature that they can be exclusively equated with a sound-track or a photographic negative; and the notion of a fusion of the media in a concrete act of remembering

is not calculated to make the basic concept of the engram more intelligible.

This difficulty is not diminished when the engram is extended to include so-called racial memories, to cover the phenomena of instinct and heredity. Racial engrams would presumably be unintentional, at least in large part; at any rate, they must differ widely from the engram resulting from a present determination to remember a particular item in our personal experience. Are we to attribute both sorts of engram to the same mechanism, or must we complicate matters by supposing two mechanisms? Further, when the exigencies of a theory of heredity compel writers such as Semon to localize the racial engrams "in something smaller than the cell or even the nucleus of the cell," we find the analogy of the recording mechanism still harder to accept, and are disposed to agree with the verdict of Miss Beatrice Edgell[1]: "I wonder whether it is merely imagination or whether it is thought which jibs at the diversity of patterns which such a fragment of tissue must be made to yield in its ultimate elements."

After all, the mnemic hypothesis belongs to the type of argument exemplified by Pearson's analogy of the telephone exchange—that remarkable analogy by which a mind shut up in itself and confined to its own sense impressions nevertheless contrived to find out that there was a telephone exchange and that it was inside one. Here the analogy of the record takes the form of assuming the existence of a highly complicated apparatus which is certainly not at first sight a mere complex of sense impressions, and then using it as a principle of explanation without the least attempt to show why it should be accorded such a status, or even how it came into being at all. Descartes, in a simpler age, could hold that organisms are "worked" by the same kind of springs and tubes that we find in human machines, the only difference being that in the former case they are too small to be perceived;[2] nowadays we have a far more diversified stock of machines from which to draw analogies, but the logical procedure remains the same. Merely ascribe to devices operating below the level of perception whatever explanatory traits are needed, and all problems will disappear.

Even at our ordinary level of experience, it is manifestly fallacious to conclude that because certain natural processes can be more or less closely duplicated by our machines, something closely analogous to such machines must be at the basis of the natural process. After all, a motor-car does not copy a horse, nor a submarine a fish, nor an airplane a bird, and there is really no better

[1] *Theories of Memory* (1924), p. 18.

[2] See the citations in Schuhl, *Machinisme et philosophie* (1938), pp. 37–38.

warrant for supposing that our skulls contain miniature telephone exchanges or libraries of microfilm. We can smile at the simplicity of Descartes' automatons; but the eagerness to grasp at some recent invention as if it explained all the riddles of the centuries may be just as simple. Considering the matter from another angle, we must reflect that the processes that go on in a living organism are not, in detail, at all similar to those of a factory or a power-plant. It is a commonplace of biology that vital processes take place within a rather restricted range of temperatures, quite unlike those amid which our chief industrial materials are produced.[3] Hence we are by no means compelled to suppose that the records which presumably form the basis of memory are made in a way at all comparable to our own methods of recording.

It is indeed arguable that the only reason we can reproduce inorganic phenomena is that we are not ourselves inorganic. Has anyone ever seriously maintained that the Lisbon earthquake learned from its predecessors, or was trying to surpass them? From this it could be further argued that to reproduce organic features in their true shape, we should have to become what might be called "super-organic." Obviously it is not feasible to assign any positive content to such a notion; but at least it suggests a reason for supposing that our attempts to reproduce vital phenomena can never be more than approximate, and it seems a reasonable inference for those who accept the position that there is a real discontinuity, a real difference of levels, between the lifeless and the living.[4] As such, I pass it on to the cosmologists who may be interested in that question.

For the second example of our present discussion, let us take Royce's celebrated illustration of the self-representative map.[5] If, he says, an ideal map is conceived as drawn on a part of the surface to be mapped, "it will have to contain, as a part of itself, a representation of its own contour and contents. In order that this representation should be constructed, the representation itself will have to contain, as a part of itself, a representation of its own contour and contents; and this representation, in order to be exact, will have once more to contain an image of itself, and so on without limit." Royce freely recognizes that such an endless series of maps could not be physically constructed; but he maintains that if a perfect observer found such a series, he would understand why there

[3] Interesting in this connection are the reflections of Paul Valéry, "L'homme et la coquille," in the *Nouvelle Revue Française* for February, 1937.

[4] Cf. my remarks in "The Locus of Novelty," this JOURNAL, Vol. XXXV (1938), p. 146.

[5] *The World and the Individual*, I, pp. 503–507.

could be within it no end consistent with the original requirement, which would demand the infinite series in the interest of completely accurate representation.

Now it is safe to say that no normal map-maker has ever had the least intention of constructing a self-representative map. What he wants is to produce a convenient record of certain aspects of the earth's surface; and all the refinements of projections and conventions are directed to the better carrying out of that purpose. When we consider that a scale of one inch to the mile is the smallest which will adequately embody the information required by the ordinary map-user,[6] and that on such a scale the first "map-within-a-map" might cover an area about 1/100 of an inch square for the England of Royce's illustration, it is easy to see what even the next reduction would be like, and how slight would be the possibility of producing anything which could be called a series. Moreover, since for completeness every object of a size similar to that of the map would have to be included, it is obvious that the map would never be perfect, since not all the objects would remain in their original state during the making of it. (Any map-user knows how new roads and buildings are always entering to complicate the picture.) Altogether, it is hard to see why it is worth while to postulate an observer of impossible powers observing a series of objects which could not exist, or how it would be possible to expect any insight into reality from such a supposition.

In short, the whole purpose of a map, as Lloyd Morgan has reminded us,[7] is "to emphasize essential relationships, to reduce the scale of the real to compassable limits," and to do this by the omission of detail, to such degree as may conduce to the end in view. It is evident that the whole aim and intention of the map is toward the region mapped, not toward self-representation, and that omission, not inclusion, must in the last resort be the guiding principle. Here, as with the engram, the question of scale can not be left out of account. Just as we can not reasonably suppose that a recording mechanism can be indefinitely reduced in size and continue to function, so we can not suppose that a map can be executed at the dimensions of a wave-length of light, or that it would be of any use if it could. If we suppose a record at all, it must be on a workable scale; but it must also be of such a nature that it does not falsify any essential aspect of the experience from which it is drawn, and to which it is intended to apply.

Our third example shows an attempt to set the record itself,

[6] Cf. H. S. L. Winterbotham, *A Key to Maps* (1936), pp. 6, 25.

[7] *Instinct and Experience* (1912), pp. 146–148. The passage, too long to quote here, should be read in its entirety.

rather than the means by which it is produced, in a primary position. I refer, of course, to Eddington's doctrine of "pointer readings" as the only material of exact science. A few sentences [8] will suffice to recall its main features. "Two tons *is* the reading of the pointer when the elephant was placed on a weighing-machine. . . . 60° *is* the reading of a plumb-line against the divisions of a protractor. . . . We are left with only pointer readings. . . . The whole subject-matter of exact science consists of pointer readings and similar indications. We can not enter here into the definition of what are to be classed as similar indications. The observation of approximate coincidence of the pointer with a scale-division can generally be extended to include the observation of any kind of coincidence. . . . The essential point is that, although we seem to have very definite conceptions of objects in the external world, these conceptions do not enter into exact science and are not in any way confirmed by it."

Of these points, the oddest one is probably the statement that our conceptions of objects in the external world do not enter into exact science. For what are these various instruments by means of which pointer readings are secured? They are devices fashioned on the level of ordinary experience, and embodying qualities which are discovered or produced on that level. How are the properties of optical substances or invariant alloys, for instance, to be ascertained, if not by observation and experiment? Naturally pointer readings come in to confirm and record results; but they are not the point of departure, nor are they recorded as an end in themselves. There must be a pointer before there can be a reading; and no scientist is likely to treat his instruments as if they resembled the scientific table, "with its substance (if any) thinly scattered in specks in a region mostly empty." If he did, it is reasonably certain that he would have neither pointer readings nor anything else to record.

Another point to be remembered is that exact instruments, in any great number, are fairly recent creations. Are we to conclude that nothing existed before there was a pointer to register it? It is undeniable that exact science, in many of its aspects, is a recent creation of the human intellect; but that would seem to be a different thing. Suppose that we consider a definite case, again on the ordinary experiential level. It is not so many years since the construction of a reliable instrument for measuring the velocity of wind; but no one yet knows how hard the wind can blow, because at its height it blows the measuring instrument away. Are we to conclude either that the wind did not exist before its velocity could

[8] *The Nature of the Physical World* (1933), pp. 250 ff.

be measured, or that it ceased to exist as soon as it blew the anemometer away? Again, a good deal of observational knowledge of the local behavior of winds was acquired centuries before there were meteorological observatories; was this knowledge worthless because it was not "exact" in Eddington's sense, or did it apply to something really non-existent? The more one follows this line of thought, the stranger are the consequences to which it appears to lead.

In this connection it is worth noting that the Beaufort scale for estimating wind velocities (devised in 1805, revised a century later) "may seem somewhat crude, but in practice is found to give good results. Its use is enhanced by the fact that at many meteorological stations no special apparatus for measuring wind is installed."[9] Yet it is hard to equate this method of estimation with pointer readings in any strict sense, and we must regret Eddington's disinclination to explain how "similar indications" are to be defined. I do not find that the matter is clarified by his later admission[10] that "physical science comprises, besides 'laws of nature,' a vast amount of special information about the particular objects surrounding us," if physical knowledge is still to be defined as "a knowledge of the associations of pointer readings." If, as seems often to be clearly the case, this special information is attained without recourse to pointer readings in any proper sense, its status is surely very ambiguous, and in urgent need of further discussion.

All three of our examples thus rest on certain types of records or recording instruments to which is assigned a privileged status, largely or wholly independent of ordinary physical conditions, without showing why this status should be accorded them. It may seem a strange attitude, and yet it is a natural one, the reason for which is that any attempt to understand our world involves the making of distinctions, and that they have to be made with a definite end in view, some of them in the sensory field, others in the conceptual constructions of analysis.[11] It is natural to take for granted the distinctions which are made, almost instinctively, in the sensory field of each individual, who seldom pauses to analyze what he finds there. (Even when such analysis is undertaken, it is very difficult to carry it through, as the disputes over the nature of perception sufficiently prove.) Now the sensory field of the present-day physicist is already furnished with an abundance of instruments which he takes for granted because they are the means to further discov-

[9] W. H. Pick, *A Short Course in Elementary Meteorology*, p. 5.

[10] *The Philosophy of Physical Science* (1939), p. 104.

[11] See Charles H. Toll, "The Relativity of Any Analysis," this JOURNAL, Vol. XXI (1924), pp. 57–64—a valuable contribution to sound epistemology.

ery; and this is perfectly legitimate, provided that it is taken as a normal human attitude, and not as something strangely privileged.

All this amounts to saying that weighing-machines, calipers, anemometers, are in our present world, just as tables and chairs and houses are—and with precisely the same status. Whatever any supposed object may ultimately be analyzed into, our knowledge of it begins on our ordinary level. Any physical instrument looks to the physicist essentially as it does to anyone else; we read scales precisely as we sit on chairs and put books on tables. It is entirely possible to analyze these ordinary situations into something very different from their initial appearance; but if such an analysis is undertaken, no supposed object is exempt from it, and if it is not undertaken, every object should be exempt from it unless for good and specific reasons assigned. Every human activity begins with an equipment; and the equipment of the physicist, admirable as it is, must not be overvalued.

In short, the record, as compendious, must always be viewed with reference to the field from which it was drawn, and to which it applies. Since either its creation or at least its interpretation is the result of human intervention, it may be more or less accurate; and since individual records, as they multiply, must themselves be made more compendious, a new set of problems arises, which, however, would demand another occasion for their consideration. It is enough for the present to insist that there is nothing about any sort of record which justifies us in cutting it off from experience in general, or in expecting it to give us an utterly novel sort of information. Whatever novelty may be yielded, if any, must somehow be related to that experience if it is to be made anything of at all. If how this is to be done remains in some aspects a logical puzzle, it seems in actual practice that "disclosures" are made which do add to our knowledge, sometimes in ways sufficiently surprising. This may not be a startling conclusion, but it seems to be at any rate a sound one.

Thus we are in no way compelled to regard either records or the means by which they are produced as privileged beyond the other elements of experience, or as entering that experience in some peculiarly authoritative way. So long as we are persons, we can not expect to create a purely impersonal science, from which the traits of individual observers and instruments are entirely excluded; nor can we build a conception of the world exclusively in terms of pointer readings. The same thinkers who raise the cry of "anthropomorphic" against whatever displeases them show no hesitation in relying on instruments which are man-made and man-read. The reliance is presumably well placed; but why be so confident of

human ability in one direction and so doubtful of it in others? Why not give all human activities a fair start at the ordinary perceptual level, instead of trying to decide in advance which are likely to succeed and which are not?

CHARLES E. WHITMORE.

HINGHAM CENTER, MASSACHUSETTS.

BOOK NOTES

Boethius. Some Aspects of his Times and Work. HELEN M. BARRETT. Cambridge, England: The University Press. New York: The Macmillan Company. 1940. ix + 179 pp. $1.75.

This little study, as the author states, is "an attempt to rescue Boethius from being generally forgotten" (p. vii). No new materials are brought to this task, but the available sources, hitherto scattered among specialized scholarly writings, are utilized in conjunction with Boethius's extant writings for the purpose of giving a well-rounded picture of the man who labored as scholar, statesman, and philosopher, in times as troubled as our own.

It is in the *Consolatio philosophiae* that Miss Barrett finds the most personal and convincing expression of Boethius's philosophical convictions. His neo-platonist inspiration is properly emphasized, and found not irreconcilable with his Christian orthodoxy. While recognizing the importance of Boethius's logical commentaries and treatises for the consequent development of medieval philosophy, Miss Barrett makes no effort to analyze these works or to determine the precise character and direction of their influence on scholastic logic. Such an analysis is beyond the scope of her book. Nevertheless, familiarity with the historical development of European logic, from the time of Abelard to our own day, engenders the conviction that the influence of Boethius's logical writings has been more deep-rooted and persistent than that of his more famous *Consolation of Philosophy.* It is to be hoped that this aspect of Boethius's work will be subjected to exploration by competent scholars. Meanwhile, Miss Barrett's book is a welcome addition to our very inadequate library of modern works on the "first of the Scholastics."

E. A. M.

The Aesthetic Theory of Thomas Hobbes. With Special Reference to His Contribution to the Psychological Approach in English Literary Criticism. CLARENCE DEWITT THORPE. Ann

Arbor: University of Michigan Press. London: Humphrey Milford, Oxford University Press. 1940. ix + 339 pp. $4.00.

This study of Hobbes' esthetic theory combines a close examination of his specifically esthetic statements with a clear and relevant delineation of their philosophical perspectives. Professor Thorpe begins not with an examination of Hobbes' two main works of criticism, *The Answer to Davenport* and *The Virtues of an Heroic Poem,* but with a chapter on "Hobbes as Literary Man, Empiricist, and Psychological Aesthetician." Without minimizing Hobbes' stress on reason, the author makes clear the extent to which his philosophy rests finally on experience. In subsequent chapters Professor Thorpe shows how this empiricism, or more exactly this empirical-rationalism makes itself felt in his esthetic theory. It appears in Hobbes' reliance on psychological analysis rather than on tradition, though in this matter the author is careful to examine Hobbes' predecessors and to find his roots in Aristotle. It appears further in his acceptance as the prime factor in art of the play of imagination (nourished on memory and through it on experience) rather than certain classical forms derived from "Reason." Hobbes' trust in experience is shown even more in his acceptance of the passions not only as impelling but as guiding forces. In his theory of poetry both imagination and passion must be controlled by judgment or prudence; but this control represents for Hobbes not the traditional distrust of passion as blind and of imagination as capricious. On the contrary it represents a recognition of their veridical significance when directed toward serious ends. Thus for Hobbes poetry is not merely a diversion but an imaginative and passionate presentation of truth. The chapters dealing with Hobbes' influence on later critics will be of especial interest to students of literature.

J. S.

La logica del potenziamento. ANNIBALE PASTORE. Coi *"Principii"* di PIETRO MOSSO. Napoli: Alfredo Rondinella. 1936. 316 pp. 30 l.

Logica sperimentale. Nuovi saggi di logica del potenziamento. Calcolo psico-fisico a tre variabile. ANNIBALE PASTORE. Con *Appendice* di PIETRO MOSSO. Napoli: Alfredo Rondinella. 1939. xvi + 342 pp. 40 l.

These two volumes form an organic work: the theoretical foundation of the first is necessary for the understanding of the second, which contains two groups of applications of pure logic to the field of scientific inquiry. Their author, from the University of Turin,

has for many years devoted his particular attention to the renewal of logical studies in Italy, which now lie in abeyance there.

Professor Pastore's investigations have resulted in a "theory of logical relativity," whose principles were first systematically formulated in 1923 by his disciple and collaborator, Pietro Mosso, into a logic of exponents or "*potenziamento*" ("a system of logical terms affected by logical exponents"). This theory presents a "new concept of relation" interpreted as "*logicità universale*" or as a "universal productive activity" of thought. Such a view of thought, which would come to terms with the demands of experience, and which would justify the principle that every entity varies in itself according to the entities with which it is found in relation, "would correspond to a philosophical thesis of relativism not yet put in relief up to the present time."

Of course, it is admitted that the constructive function of thought was previously recognized by Edmond Goblot in his *Traité de logique* in the form of the principle: "*démontrer, c'est construire.*" But, it is claimed, the new "experimental logic" shows for the first time on what conditions it is possible that thought may be constructive in character. Consequently, the Aristotelian, the Protagorean, the Hegelian, and the positivistic interpretations of the concept of relation are all "sterile forms" of relativism or, at best, only partially productive.

P. R.

Études philosophique. Gaston Bachelard, Eugène Dupréel, René Le Senne, Louis Lavelle, Gabriel Marcel, Vladimir Jankélévitch, Marcel Decorte, Yves Simon, Etienne Borne. (Annales de l'École des Hautes Études de Gand, Tome III.) Gand: École des Hautes Études. 1939. xi + 251 pp.

A miscellaneous collection of essays on the theory of knowledge, metaphysics, ethics, and esthetics by a group of French philosophers, this volume will best serve American readers as an introduction to the thought of its various authors. Since few of them are as familiar to us as they are to their fellow countrymen, their essays may prove unusually interesting. Special attention should be invited to the essay of M. Jankélévitch, *La méchanceté,* which is the French equivalent of a phenomenological study. The essays of Messrs. Le Senne, Lavelle, and Simon will prove of interest to students of Catholic philosophy and the study by Marcel Decorte will be welcomed by estheticians.

G. B.

OTHER NEW BOOKS AND JOURNALS

Santo Tomas de Aquino. El Ente y la Esencia. (Texto Latino y Traducción y Notas.) Prólogo de Tomas D. Casares. Estudio Preliminar Traducción y Notas por Juan R. Sepich. Buenos Aires: Universidad de Buenos Aires. 1940. 137 pp.

Johnson, Thomas H.: The Printed Writings of Jonathan Edwards. 1703–1758. A Bibliography. Princeton: Princeton University Press. 1940. London: Humphrey Milford; Oxford University Press. xiv + 136 pp. $7.50.

MIND. Vol. XLIX, No. 196. Other Minds (I): *John Wisdom.* What is Dialectic?: *K. R. Popper.* Epistemology and the Logical Syntax of Language: *H. D. Oakeley.* Discussions—Kant's Conception of Scientific Knowledge: *W. H. Walsh.* Fact and Entailment: *E. Toms.*

AUSTRALASIAN JOURNAL OF PSYCHOLOGY AND PHILOSOPHY. Vol. XVIII, No. 2. Mathematics and the World: *D. A. T. Gasking.* Things, Predicates and Relations: *G. F. Stout.* The Problem of Analysis in Psychology: *Duncan Howie.* Mental Tests in Clinical Practice: *D. R. Martin.*

PHILOSOPHY OF SCIENCE. Volume 7, Number 4. Inverse Probability and Modern Statisticians: *R. D. Gordon.* Physics: The Decline of Mechanism: *W. M. Malisoff.* The Subject Matter of Psychology: *Gustav Bergmann.* Thought and Its Objects: *A. I. Melden.* Our Certainty of Other Minds: *R. H. Dotterer.* The Symbol: The Origin and Basis of Human Behavior: *L. A. White.* The Verifiability of Different Kinds of Facts and Values: *Ray Lepley.* A Framework for an Empirical Ethics: *B. F. Ritchie* and *Abraham Kaplan.* Prediction in the Social Sciences: *Oscar Kaplan.* Presupposition and Objectivity in History: *Sidney Ratner.*

JOURNAL OF SOCIAL PHILOSOPHY. Volume Six, Number One. The Dynamics of Justice: *H. F. Simon.* "Class" and Class Struggle: *Walter Sulzbach.* Politics, Sociology and Values: *T. I. Cook.* Roscoe Pound and the Resurgence of Juristic Idealism: *M. J. Aronson.*

THE NEW SCHOLASTICISM. Vol. XIV, No. 4. The Unauthenticity of the *De Intellectu et Intelligibili* Attributed to St. Thomas Aquinas: *V. J. Bourke.* The Notion of Beauty in the Ethics of St. Thomas: *C. J. O'Neil.* Freedom in the God Plotinus: *C. P. Gorman.* The Relation of the Aristotelian Categories to the Logic and the Metaphysics: *K. K. Berry.*

ZEITSCHRIFT FÜR ÄSTHETIK UND ALLGEMAINE KUNSTWISSENSCHAFT. XXXIV. Band, 3. Heft. Hans Pfitzners Liedasthetik/ Ruf und Widerhal *Heinrich Lindlar.* Der Symbolwert des His-

torischen in der Baukunst unserer Zeit: *G. F. Hartlaub.* Die episierende Lyrik: *Julius Wiegand.*

We print below a list of selected articles from the following publications:

THE PERSONALIST. Autumn, 1940. Why Religion Lives: *J. B. Pratt.* Mysticism and Experience: *R. L. Patterson.* The Nature of Truth and Lord Herbert of Cherbury's Inquiry: *M. M. Rossi.* (Winter, 1941) Plato on Personality: *H. Gomperz.* Institutionalism and Democracy: *P. R. Helsel.*

JOURNAL OF THE HISTORY OF IDEAS. Volume 1, Number 4. Science and Criticism in the Neo-Classical Age of English Literature: *R. F. Jones.* Lotze's Influence on the Pragmatism of William James: *Otto Kraushaar.* A Problem in the History of Ideas: *F. J. E. Teggart.*

THE AMERICAN SCHOLAR. Vol. 10, No. 1. The Historical Position of Liberalism: *G. H. Sabine.* Understanding Poetry: *Babette Deutsch.* Life as the Guide of Philosophy: *Roscoe Pound.*

THE HIBBERT JOURNAL. Vol. XXXVIII, No. 4. Freedom or Necessity in the Making of History: *H. D. Oakeley.* Is the Doctrine of an Intelligent First Cause Out of Date? *J. E. Wishart.* Bergson and World-Loyalty: *Helen Wodehouse.* Reality and Utopia: *Maxwell Garnett.* Dalmatian Philosophers: *Dusan Stojanovic.* (Vol. XXXIX, No. 1) Fortifying the Individual: *J. C. Hardwick.* Heroic Humanism: *Alexander MacEwen.* What is Great Poetry? The Criterion of a Forgotten Critic: *Edward Lyttelton.* Survey of Recent Philosophical Literature: *G. Dawes Hicks.*

THE HARVARD THEOLOGICAL REVIEW. Volume XXXIII, Number 4. Orphism or Popular Philosophy? *A. D. Nock.*

THOUGHT. Volume XV, Number 59. The Nature of Thought: *M. C. D'Arcy.*

We have received the following reprints:

"Chaucer's Text-book of Astronomy; Johannes de Sacrobosco" by Walter B. Veazie. From *University of Colorado Studies,* Vol. 1, No. 2, pp. 169–182.

"Aspects of the Relations between Philosophy and Literature" by J. W. Cohen. From *University of Colorado Studies,* Vol. 1, No. 2, pp. 117–167.

"Hobbes and Hobbism" by Sterling P. Lamprecht. From *The American Political Science Review,* Vol. XXXIV, No. 1, pp. 31–53.

INDEX

NAMES OF CONTRIBUTORS ARE PRINTED IN SMALL CAPITALS

Abstracts of Papers to be Read at the Fortieth Annual Meeting of the Eastern Division of the American Philosophical Association, University of Pennsylvania, December 26, 27, and 28, 1940, 673.

Accidents of Peirce's System, The. Comments and Criticism.—JUSTUS BUCHLER, 264.

ADORNO, THEODORE W.—Husserl and the Problem of Idealism, 5.

de Agüero's Principios de ideología, 669.

Albertelli's Gli eleati, 51.

ALDRICH, VIRGIL C.—The Spirit of the New Positivism, 431.

American Catholic Philosophical Association Proceedings, Philosophy of the State, Vol. XV, 471.

American Philosophical Association, Abstracts of Papers to be Read at the Fortieth Annual Meeting of the Eastern Division of the, University of Pennsylvania, December 26, 27, and 28, 1940, 673.

Analogy of the Record, The.—C. E. WHITMORE, 711.

Analysis of the Poetic Simile.—MAX RIESER, 209.

ANDERSON, JOHN M.—Realism and the Ethical Paradoxes, 571.

Aristotelian Society Proceedings, 1938–1939, 75.
Hume and Present Day Problems, 75.

Art and Cognition, A Note on.—M. W. HESS, 579.

Bachelard's (*et al.*) Études philosophique, 721.

BALDWIN, ROBERT C.—The Meeting of Extremes in Recent Esthetics, 348.

Barrett's Boethius. Some Aspects of his Times and Life, 719.

Bartlett's Types of Aesthetic Judgment, 474.

Barzun's Of Human Freedom, 22.

BAYLIS, CHARLES A.—How to Make Our Ideas Clearer, 225.

BECK, LEWIS WHITE.—The Psychophysical as a Pseudo-Problem, 561.

Beck's Psychologie, 278.

Berkson's Preface to an Educational Philosophy, 670.

Bewkes' (*et al.*) Experience, Reason and Faith, 615.

BICHOWSKY, F. R.—Factors Common to the Mind and to the External World, 477.

Bidney's The Psychology and Ethics of Spinoza.—M. W. GROSS, 386.

Bixler's Religion for Free Minds, 445.

Blanshard's The Nature of Thought.—T. M. GREENE, 695.

Boodin's The Social Mind.—H. W. SCHNEIDER, 187.

Bowman's A Sacramental Universe, 19.

Bréhier's La philosophie et son passé, 555.

Brentano, Franz, Abhandlungen zum Gedächtnis des 100. Geburtstages von. Naturwissenschaft und Metaphysik.—MAURICE MANDELBAUM, 134.

Brightman's A Philosophy of Religion, 475.

Brownell's Art is Action, 192.

Brubacher's Modern Philosophies of Education, 54.

BUCHLER, JUSTUS.—The Accidents of Peirce's System, 264.

Buchler's Charles Peirce's Empiricism.—T. A. GOUDGE, 274.

Burch's The Steps of Humility by Bernard, Abbot of Clairvaux, 637.

BURES, CHARLES E.—Operationism, Construction, and Inference, 393.

BUSH, W. T.—Concerning the Concept of Pattern, 113.

Campanella's Quod reminiscentur et convertentur ad dominum universi fines terrae.
Epilogo magno.

Campo's Cristiano Wolff e il razionalismo precritico, 611.

Causality, Responsibility, Freedom, and.—D. C. MACINTOSH, 42.

Causation, Action, and Creation.—MAX RIESER, 491.

Chatterjee's The Nyāya Theory of Knowledge, 191.
and Datla's An Introduction to Indian Philosophy, 529.

CHIN, Y. L.—The Principle of Induction and *A Priori*, 178.

CLARK, JOHN A.—Intuition and Criticism in Ethics, 546.

Colesanti's Esiste una morale? 416.

Comments and Criticism, 264, 407, 504, 579.

Conceptual Relativity.—L. J. LAFLEUR, 421.

Concerning the Concept of Pattern.—W. T. BUSH, 113.
the Emphasis on Methods. Comments and Criticism.—J. A. LYNCH, 269.
the Status of So-called "Pseudo-Object" Sentences.—C. J. DUCASSE, 309.

Consequences for Metaphysics of Quantum-Mechanics, The.—C. H. KAISER, 337.

COOLIDGE, MARY L.—Today's Philosophy and Tomorrow's, 617.

Cornford's Plato and Parmenides, 77.
Costanzi's Pensiero ed essere, 697.
Cowdrick's The Early Reading of Pierre Bayle, 191.
CREED, ISABEL P.—The Justification of the Habit of Induction, 85.
Cresson's Platon, sa vie, son oeuvre, avec un exposé de sa philosophie, 165.
Criticism and Fixed Species, ROBERT MCRAE, 297.

Dakin's Man the Measure, 220.
Decoster's Positions et confessions, 390.
Determinism or Indeterminism, The Dilemma of; or, Responsibility, Freedom, and Causality.—D. C. MACINTOSH, 42.
DEWEY, JOHN.—The Vanishing Subject in the Psychology of James, 589.
Dewey, John, Essays in Honor of. The Philosopher of the Common Man.—J. H. TUFTS, 332.
Discussion of Professor Loewenberg's Paper.—PERCY HUGHES, 290.
DUCASSE, C. J.—Concerning the Status of So-called "Pseudo-Object" Sentences, 309.
Propositions, Opinions, Sentences, and Facts, 701.

Eddington's The Philosophy of Physical Science.—ERNEST NAGEL, 161.
EDMAN, IRWIN.—Professor Greene's "Critique of Art," 449.
Empirical, What is?—J. LOEWENBERG, 281.
Essence of Peirce's System, The.—PAUL WEISS, 253.
Esthetics, The Meeting of Extremes in Recent.—R. C. BALDWIN, 348.
Symbolic Logic and.—M. S. HARRIS, 533.
Ethical Paradoxes, Realism and the.—J. M. ANDERSON, 571.
Ethics, An Experimental Critique of Rationalistic.—R. E. FITCH, 365.
Intuition and Criticism in.—J. A. CLARK, 546.
Experimental Critique of Rationalistic Ethics, An.—R. E. FITCH, 365.

Factors Common to the Mind and to the External World.—F. R. BICHOWSKY, 477.
Feibleman's In Praise of Comedy, 249.
Positive Democracy, 557.
FITCH, R. E.—An Experimental Critique of Rationalistic Ethics, 365.
Freedom, and Causality, Responsibility. —D. C. MACINTOSH, 42.

Garnett's The Kantian Philosophy of Space.—O. F. KRAUSHAAR, 103.
Wisdom in Conduct, 441.
Gilbert's and Kuhn's A History of Esthetics.—IRWIN EDMAN, 217.
Glock's Wilhelm Diltheys Grundlegung einer wissenschaftlichen Lebensphilosophie, 138.
Goheen's The Problem of Matter and Form in the *De Ente et Essentia* of Thomas Aquinas, 305.
Görland's Ästhetik, 443.
Greene, Has Professor, Proved that Art is a Cognitive Process?—VINCENT TOMAS, 459.
Greene's The Arts and the Art of Criticism, 449.
Groos's Willensfreiheit oder Schicksal? 441.

HARRIS, MARJORIE S.—Symbolic Logic and Esthetics, 533.
Has Professor Greene Proved that Art is a Cognitive Process?—VINCENT TOMAS, 459.
Heintel's Nietzsches "System" in seinem Grundbegriffen, 363.
HENDERSON, EDGAR H.—Values, Time, and Consciousness, 152.
HESS, M. WHITCOMB.—A Note on Art and Cognition, 579.
Hessen's Platonismus und Prophetismus, 586.
Hlučka's Das Problem der Logik als Entwicklung des Prinzips der Heterothese, 52.
How to Make Our Ideas Clearer.—C. A. BAYLIS, 225.
HUGHES, PERCY.—Discussion of Professor Loewenberg's Paper, 290.
Hull's (*et al.*) Mathematico-Deductive Theory of Rote Learning, 277.
Husserl and the Problem of Idealism.—T. W. ADORNO, 5.

Idealism, Husserl and the Problem of.—T. W. ADORNO, 5.
Individualistic and Collectivistic Liberty. —M. H. THOMPSON, JR., 382.
Induction, The Justification of the Habit of.—ISABEL P. CREED, 85.
On the Justification of.—HANS REICHENBACH, 97.
The Principle of, and *A Priori*.—Y. L. CHIN, 178.
Inference, Proposition, Judgment and.—J. J. TOOHEY, 232.
Inquiry and Discourse.—ANDREW USHENKO, 484.
Insight and Analysis.—LINCOLN REIS, 651.
Instrumentalism and Action.—OTIS LEE, 57.
Intuition and Criticism in Ethics.—J. A. CLARK, 546.

Jakowenko's Geschichte des Hegelianismus in Russland, 109.
James, The Vanishing Subject in the Psychology of.—JOHN DEWEY, 589.

Jeffreys' Theory of Probability.—Ernest Nagel, 524.
Joachim's Spinoza's Tractatus de Intellectus Emendatione.—M. W. Gross, 386.
Judgment, and Inference, Proposition.—J. J. Toohey, 232.
Justification of the Habit of Induction, The.—Isabel P. Creed, 85.

Kaiser, C. H.—The Consequences for Metaphysics of Quantum-Mechanics, 337.
Kantor, J. R.—Postulates for a Logic of Specificity, 29.
Kaplan's Philosophy in the Poetry of Edwin Arlington Robinson, 443.
Kein's Schellings Kategorienlehre, 247.
Klein's Von der All-Einheit im Ich, 470.
Klibansky's The Continuity of the Platonic Tradition during the Middle Ages, 409.
Plato Latinus, Meno, 695.

Lafleur, Laurence J.—Conceptual Relativity, 421.
Time as a Fourth Dimension, 169.
Leander, Folke.—Comments and Criticism, 407.
Lee, Harold N.—A Precise Meaning for Objective and Subjective in Value Theory, 626.
Lee, Otis.—Instrumentalism and Action, 57.
Liberty, Individualistic and Collectivistic.—M. H. Thompson, Jr., 382.
Two Meanings of.—P. B. Rice, 376.
Lipsius' Two Bookes of Constancie, 54.
Loewenberg, J.—What is Empirical? 281.
Logic, Especially to Mathematics and, Some Traditional Sceptical Principles; and their Application.—Gardner Williams, 599.
of Specificity, Postulates for a.—J. R. Kantor, 29.
Lombardi's Critica delle metafisiche, 248.
Lynch, J. A.—Concerning the Emphasis on Methods, 269.

Macintosh, Douglas Clyde.—Responsibility, Freedom, and Causality, 42.
Macintosh's The Problem of Religious Knowlege, 642.
MacIver's Leviathan and the People, 249.
MacKaye's The Logic of Language, 219.
Maier's On Hegel's Critique of Kant, 190.
Maritain's Scholasticism and Politics, 638.
Mason's The X of Psychology, 698.
Mattei's L'Homme de Descartes, 469.
Matter and God.—Charles M. Perry, 645.
McKerrow, J. C.—Principia Non-Mathematica, 197.
McRae, Robert.—Criticism and Fixed Species, 297.
Meeting of Extremes in Recent Esthetics, The.—R. C. Baldwin, 348.
Methods, Concerning the Emphasis on. Comments and Criticism.—J. A. Lynch, 269.
Miller's History and Science, 412.
The New England Mind, 79.
von Mises's Kleines Lehrbuch des Positivismus, 414.
Modern Art and Social Responsibility.—W. J. Norton, Jr., 325.
van Molle's La philosophie de Paul Decoster, 390.
Montague's The Ways of Things, 505.
Morgan, George, Jr.—Selfishness and Unselfishness, 401.
Morrow's Plato's Law of Slavery in its Relation to Greek Law, 499.
Muelder's and Sears' The Development of American Philosophy, 639.
Munitz's The Moral Philosophy of Santayana, 51.

Nicholson's An Introductory Course in Philosophy, 53.
Norton, William J., Jr.—Modern Art and Social Responsibility, 325.
Note on Art and Cognition, A.—M. W. Hess, 579.
Notes and News, 27, 56, 84, 112, 140, 168, 196, 223, 252, 280, 308, 364, 392, 419, 448, 476, 532, 560, 588, 616, 671, 698.

Objects Perceived and Objects Known.—A. G. Ramsperger, 291.
Operationism, Construction, and Inference.—C. E. Bures, 393.
Oresme's Le Livre de Ethiques d 'Aristotle, 408.
Osgniach's The Analysis of Objects, 26.
Other New Books and Journals, 27, 56, 82, 110, 139, 167, 195, 222, 251, 280, 308, 335, 364, 391, 418, 447, 476, 502, 559, 644, 671, 722.
Otto's The Human Enterprise.—John Dewey, 303.

Packer's Cicero's Presentation of Epicurean Ethics, 166.
Palmer's Catholics and Unbelievers in Eighteenth Century France, 23.
Pastore's La logica del potenziamento, 720.
Logica sperimentale, 720.
Pattern, Concerning the Concept of.—W. T. Bush, 113.
Peirce's System, The Essence of.—Paul Weiss, 253.
System, The Accidents of.—Justus Buchler, 264.
Perception, A Theory of.—Andrew Ushenko, 141.
Perry, Charles M.—Matter and God, 645.

Perry's The Multidimensional Society, 334.
Pledge's Science since 1500, 307.
Poetic Simile, Analysis of the.—MAX RIESER, 209.
Positivism, The Spirit of the New.—V. C. ALDRICH, 431.
Postulates for a Logic of Specificity.—J. R. KANTOR, 29.
Precise Meaning for Objective and Subjective in Value Theory, A.—H. N. LEE, 626.
Preiswerk's Das Einzelne bei Plato und Aristoteles, 109.
Principia Non-Mathematica.—J. C. McKERROW, 197.
Principle of Induction and *A Priori*, The.—Y. L. CHIN, 178.
Professor Greene's "Critique of Art."—IRWIN EDMAN, 449.
Montague's *The Ways of Things*.—W. H. SHELDON, 505.
Proposition, Judgment, and Inference.—J. J. TOOHEY, 232.
Propositions, Opinions, Sentences, and Facts.—C. J. DUCASSE, 701.
Psychophysical as a Pseudo-Problem, The.—L. W. BECK, 561.

Quantum-Mechanics, The Consequences for Metaphysics of.—C. H. KAISER, 337.
Quine's Mathematical Logic, 640.

Radin's Law as Logic and Experience, 668.
RAMSPERGER, A. G.—Objects Perceived and Objects Known, 291.
Realism and the Ethical Paradoxes.—J. M. ANDERSON, 571.
REICHENBACH, HANS.—On the Justification of Induction, 97.
REIS, LINCOLN.—Insight and Analysis, 651.
Relativity, Conceptual.—L. J. LAFLEUR, 421.
Responsibility, Freedom, and Causality; or, The Dilemma of Determinism or Indeterminism.—D. C. MACINTOSH, 42.
Reyer's Organische Psychologie, 52.
RICE, PHILIP BLAIR.—Two Meanings of Liberty, 376.
RIESER, MAX.—Causation, Action, and Creation, 491.
Riezler's Physics and Reality, 438.
Rolbiecki's The Prospects of Philosophy, 502.
Romero's Alejandro Korn, 612.
Rosen's Three Copernican Treatises, 194.
Ross's Foundations of Ethics.—H. W. SCHNEIDER, 244.
Scepticism and Dogma, 470.
Rovighi's La filosofia di Edmund Husserl, 587.

Santayana's Egotism in German Philosophy, 439.
Schaub's Progressism, 391.
Schiller's Our Human Truths.—M. C. OTTO, 657.
Scudder's Tennant's Philosophical Theology, 530.
Selfishness and Unselfishness.—GEORGE MORGAN, JR., 401.
Serrus's Essai sur la signification de la logique, 335.
Shaw's Art's Endurance, 475.
SHELDON, W. H.—Professor Montague's *The Ways of Things*, 505.
Shewhart's Statistical Method from the Viewpoint of Quality Control, 501.
Some Traditional Sceptical Principles; and their Application, Especially to Mathematics and Logic.—GARDNER WILLIAMS, 599.
Sorley's A History of English Philosophy, 80.
Souriau's Avoir une âme, 82.
L'instauration philosophique, 82.
Spalding's Civilization in East and West, 417.
Spirit of the New Positivism, The.—V. C. ALDRICH, 431.
Stace's The Nature of the World.—S. C. PEPPER, 581.
Symbolic Logic and Esthetics.—M. S. HARRIS, 533.

Theory of Perception, A.—ANDREW USHENKO, 141.
THOMPSON, MANLEY H., JR.—Individualistic and Collectivistic Liberty, 382.
Thorpe's The Aesthetic Theory of Thomas Hobbes, 719.
Time as a Fourth Dimension.—L. J. LAFLEUR, 169.
Tisserand's Oeuvres de Maine de Biran, Tome XI, Tome XII, 529.
Today's Philosophy and Tomorrow's.—M. L. COOLIDGE, 617.
TOMAS, VINCENT.—Has Professor Greene Proved that Art is a Cognitive Process? 459.
TOOHEY, JOHN J.—Proposition, Judgment, and Inference, 232.
Treves' Trattato d'estetica, 110.
Trueblood's The Knowledge of God, 531.
Two Meanings of Liberty.—P. B. RICE, 376.

URBAN's Language and Reality.—T. M. GREENE, 358.
USHENKO, ANDREW.—Inquiry and Discourse, 484.
A Theory of Perception, 141.

Value Theory, A Precise Meaning for Objective and Subjective in.—H. N. LEE, 626.
Values, Time, and Consciousness.—E. H. HENDERSON, 152.
Vanishing Subject in the Psychology of James, The.—JOHN DEWEY, 589.
Varisco's Dall' uomo a Dio, 221.

Waley's Three Ways of Thought in Ancient China, 444.
Weischedel's Der Aufbruch der Freiheit zur Gemeinschaft, 411.
Welch's Edmund Husserl's Phenomenology, 500.
Werkmeister's A Philosophy of Science, 614.
What is Empirical?—J. LOEWENBERG, 281.
WHITMORE, CHARLES E.—The Analogy of the Record, 711.
Whitney's and Bowers' The Heritage of Kant.—O. F. KRAUSHAAR, 608.
WILLIAMS, GARDNER.—Some Traditional Sceptical Principles; and their Application, Especially to Mathematics and Logic, 599.
Winslow's Jonathan Edwards, 1703–1758, 390.
Winspear's and Silverberg's Who Was Socrates? 25.
Woodger's The Technique of Theory Construction, 21.
Wundt's Die deutsche Schulmetaphysik des 17. Jahrhunderts, 137.
Die Sachlichkeit der Wissenschaft, 416.

Young's Thomas Carlyle and the Art of History, 80.

Zocher's Die philosophische Grundlehre, 81.

PERIODICAL ROOM
GENERAL LIBRARY
UNIV. OF MICH.

DEC 27 1940

THE JOURNAL OF PHILOSOPHY

VOL. XXXVII, NO. 26: DECEMBER 19, 1940

CONTENTS

Propositions, Opinions, Sentences, and Facts: C. J. DUCASSE... 701

The Analogy of the Record: CHARLES E. WHITMORE..... 711

Book Notes..... 719

HELEN M. BARRETT, *Boethius, Some Aspects of his Times and Work.*

CLARENCE DEWITT THORPE, *The Aesthetic Theory of Thomas Hobbes.*

ANNIBALE PASTORE, *La logica del potenziamento.*

ANNIBALE PASTORE, *Logica sperimentale.*

GASTON BACHELARD, *et al.*, *Études philosophique.*

Other New Books and Journals..... 722

Index to Volume XXXVII..... 724

PUBLISHED FORTNIGHTLY

BY THE

JOURNAL OF PHILOSOPHY, INC.

THE JOURNAL OF PHILOSOPHY

Founded by Frederick J. E. Woodbridge.

EDITORS: Wendell T. Bush, Herbert W. Schneider, John H. Randall, Jr., Ernest Nagel.

BOOK EDITORS (1939–1942): George Boas, Justus Buchler, Harry T. Costello, John D. Goheen, Albert Hofstadter, Otto F. Kraushaar, Paul O. Kristeller, Kenneth P. Landon, Harold A. Larrabee, Donald S. Mackay, Marcus B. Mallett, V. J. McGill, Ernest A. Moody, Pasquale Romanelli, George C. Seward, Jeffery Smith, Norman L. Torrey.

THE JOURNAL OF PHILOSOPHY is owned by the Journal of Philosophy, Inc., and published fortnightly at Prince and Lemon Sts., Lancaster, Pa. Editorial Office: 515 West 116th St., New York, N. Y. President, Wendell T. Bush; Treasurer, Herbert W. Schneider; Secretary, Iris Wilder Dean.

Communications to the editors should be addressed, Columbia University, New York. Subscriptions and advertisements should be sent to THE JOURNAL OF PHILOSOPHY, Prince and Lemon Streets, Lancaster, Pa., or 515 West 116th Street, New York. The annual subscription price (twenty-six numbers) is $4.00. The price of single numbers is 20 cents, except the annual bibliography number, the price of which is $1.00. Advertising rates will be forwarded on application.

Entered as second class matter, March 18, 1921, at the Post Office at Lancaster, Pa., under Act of Congress of March 3, 1879.

ANNUAL BIBLIOGRAPHY
OF PHILOSOPHY

Covering the scholarly philosophical literature published in English, French, German, and Italian. Classified according to subject-matter and indexed for authors' names.

For 1936, double number of THE JOURNAL OF PHILOSOPHY, Volume XXXIV, Nos. 16 and 17, August, 1937. 56 pp.

For 1935, Volume XXXIII, Nos. 17 and 18, August, 1936. 56 pp.

For 1934, Volume XXXII, Nos. 17 and 18, August, 1935. 56 pp.

For 1933, the first issue, Volume XXXI, Nos. 17 and 18, August, 1934. 56 pp.

Price $1.00 each bibliography number, the 4 numbers, $2.75.

For sale at

JOURNAL OF PHILOSOPHY, INC.

515 West 116th Street **New York City**

THE JOURNAL OF PHILOSOPHY

There is no similar journal in the field of scientific philosophy. It is issued fortnightly and permits the quick publication of short contributions, prompt reviews, timely discussions, notes on new books and other journals, and news of philosophic interest. The last six issues contain:

VOLUME XXXVII.

No. 20. September 26, 1940.

Symbolic Logic and Esthetics. MARJORIE S. HARRIS.
Intuition and Criticism in Ethics. JOHN A. CLARK.

No. 21. October 10, 1940.

The Psychophysical as a Pseudo-Problem. LEWIS WHITE BECK.
Realism and the Ethical Paradoxes. JOHN M. ANDERSON.
Comments and Criticism: A Note on Art and Cognition. M. WHITCOMB HESS.
Review of W. T. Stace's *The Nature of the World* by STEPHEN C. PEPPER.

No. 22. October 24, 1940.

The Vanishing Subject in the Psychology of James. JOHN DEWEY.
Some Traditional Sceptical Principles; and their Application, Especially to Mathematics and Logic. GARDNER WILLIAMS.
Review of George Tapley Whitney's and David F. Bowers' *The Heritage of Kant* by OTTO F. KRAUSHAAR.

No. 23. November 7, 1940.

Today's Philosophy and Tomorrow's. MARY L. COOLIDGE.
A Precise Meaning for Objective and Subjective in Value Theory. HAROLD N. LEE.

No. 24. November 21, 1940.

Matter and God. CHARLES M. PERRY.
Insight and Analysis. LINCOLN REIS.
Review of F. C. S. Schiller's *Our Human Truths* by M. C. OTTO.

No. 25. December 5, 1940.

Abstracts of Papers to be Read at the Fortieth Annual Meeting of the Eastern Division of the American Philosophical Association, University of Pennsylvania, December 26, 27, and 28, 1940.
Review of Brand Blanshard's *The Nature of Thought* by THEODORE M. GREENE.

THE JOURNAL OF PHILOSOPHY

515 W. 116th St., New York City

$4.00 per annum (26 numbers) **20 cents per copy**

RECENT PUBLICATIONS

FOR SALE AT

THE JOURNAL OF PHILOSOPHY INC.

515 W. 116th STREET NEW YORK CITY

Scepticism and Dogma

A Study in the Philosophy of F. H. Bradley

by

RALPH GILBERT ROSS

An inquiry into the consequences, for Bradley's metaphysics, of the use of scepticism as a method. It is contended that Bradley's scepticism was a consequence of his logical theory, and that it was then employed as an instrument for the attainment of truth. **159 pp. (paper cover) $1.25**

The Biological Motivation in Aristotle

by

HAROLD DONOVAN HANTZ

By approaching the Aristotelian corpus through the biology rather than after the traditional manner through the logic and metaphysics, critical questions regarding the interpretation of Aristotle are reopened. At the same time Aristotle's own estimate of his place in Greek philosophy is clarified. **42 pp. 60 cents**

Aristotle's Analysis of Movement: Its Significance for Its Time by William Barrett. 68 pp. (paper cover) 75 cents.

Locke's Conception of the Mind by James Gordon Clapp. 122 pp. (paper cover) $1.00.

Mach's Empirio-Pragmatism in Physical Science by Carlton Berenda Weinberg. 122 pp. (paper cover) $1.00.

The Significance of James' Essay by Arthur Lapan. 69 pp. (paper cover) 75 cents.

The Predicables and Predicaments in the Totius Summa Logicae Aristotelis by Lincoln Reis. 99 pp. (paper cover) $1.00.

Spinoza and Locke by Frederick J. E. Woodbridge and Sterling P. Lamprecht. (Two tercentenary addresses reprinted from the *Columbia University Quarterly.*) 29 pp. (paper cover) 40 cents.

Locke and Scepticism by Albert Hofstadter. 134 pp. (paper cover) $1.00.

Fortune and Fate from Democritus to St. Thomas Aquinas by Vincenzo Cioffari. 129 pp. (paper cover) $1.25.

Telesio, The First of the Moderns by Neil C. Van Deusen. 90 pp. (paper cover) 75 cents.

Montaigne's Philosophy of Human Nature by J. V. Mauzey. 98 pp. (paper cover) $1.00.

English Space and Time Theories from Henry More to Bishop Berkeley by John Tull Baker. 90 pp. (paper cover) 75 cents.

Realistic Ethics by Annette T. Rubinstein. 137 pp. $1.50.

A Bibliography of Philosophy, 1933, 1934, 1935, 1936. 4 issues, 56 pages each. (Double numbers of the Journal of Philosophy.) $1.00 each issue, $2.75 for the four issues.